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Indian Trade in Reptile Skins

by Tim Inskipp

WILDLIFE TRADE MONITORING UNIT

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World Wildlife Fund and the US Fish & Wildlife Service.

At the end of 1979 the Conservation Monitoring Centre was set up at Cambridge UK by the *International Union for Conservation of Nature and Natural Resources (IUCN) to collect, collate and supply essential data on which to base the management of living natural resources. The Centre comprises several units. The compilation of the Red Data Books -- status catalogues of threatened species of Mammals, Amphibians and Reptiles, Fish, Invertebrates and Birds (the latter being done by an office of the International Council for Bird Preservation) -- is carried out by the Species Conservation Monitoring Unit; the Red Data Book on Plants being compiled at a module of this unit at the Royal Botanic Gardens, Kew. The Wildlife Trade Monitoring Unit collects and analyses data on the status of wild species figuring in trade, the information being used in the management of such species and in the regulation of trading practices. A unit for monitoring the status of national parks and other specially protected areas has just been established. Data are handled by data-processor and are thus available for presentation as appropriate for any particular purpose, such as the requirements of international conservation conventions (e.g. Convention on International Trade in Endangered Species of Wild Fauna and Flora; Convention on the Conservation of Migratory Species of Wild Animals) or for determining priorities in planning conservation action by governments and NGOs.

The Conservation Monitoring Centre receives most of its financial support from the United Nations Environment Programme (UNEP) and the World Wildlife Fund (WWF), and both these organizations use the Centre's output in developing their own programmes.

This paper summarizes a report prepared by Tim Inskipp for TRAFFIC International (now the Wildlife Trade Monitoring Unit). The original data are deposited in the archives of the Conservation Monitoring Centre.

*International Union for Conservation of Nature and Natural Resources, 1196 Gland, Switzerland.

The front cover shows part of a Water monitor skin Varanus salvator and the back cover shows a Rat snake and two Asiatic cobras.

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Conservation Monitoring Centre,
219c Huntingdon Road, Cambridge CB3 0DL, United Kingdom.

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Abstract

Despite an export ban it was known that reptile skins and products were still leaving India. This study investigated the internal trade, the methods of illegal export, and the effects on reptile populations. An analysis of the trade statistics of India and the consumer countries illustrates the pattern of trade and demonstrates a continuation of illegal exports. Recommendations are given for improving the present situation.

Introduction

The export of reptile skins and products from India has been an important trade for many years. It has been estimated that in 1932 about 2,500,000 skins were exported and it is likely that approximately this level of trade was maintained annually until conservation restrictions introduced recently first severely limited and then totally banned the legal export trade. The comprehensive ban was instituted in 1979 but the export of all the commercially valuable species was prohibited by 1976.

Despite these controls it has been apparent from import statistics of consumer countries that large numbers of skins have been leaving the country.

This project was conceived to investigate the apparent illegal trade and find out:

- species involved, their relative importance, and methods of catching;
- internal trade in skins and products;
- extent of legal export trade in the past;
- methods of illegal export from the country;
- evidence of effects on wild populations and the role of reptiles in the environment.

The investigation was carried out during February to April 1980. The areas visited were the four main exporting centres: Bombay, Madras, Calcutta and Delhi with a brief visit to Mysore in the main catching area of south India.

Species Involved

[Note that the scientific and common names follow those used in Groombridge (1981) with a few minor modifications, and Whitaker (1978) for other species of snakes.]

Of the four groups of reptiles in India the snakes have constituted the most valuable part of the trade in recent years. Probably the most important species is the Rat snake Ptyas mucosus, a common and widespread species that grows to about 2 m in length. Of almost equal importance is the Asiatic cobra Naja naja (1.5 m). Other species used are the Checkered keelback watersnake Xenochrophis piscator (0.75 m), Russell's viper Vipera russelli (1 m), Indian sand boa Eryx conicus (0.5 m) which is called 'baby python' in the skin trade, and Olive keelback watersnake Atretium schistosum (0.5 m). The very large Indian python Python molurus (6 m) was an important species in the past. Other species that have been used are the Common trinket snake Elaphe helena (1.5 m), Russell's kukri snake Oligodon taeniolatus (0.5 m), Banded racer Argyrogena fasciolatus (1 m), Common cat snake Boiga trigonata (1 m), Painted bronzeback tree snake Dendrelaphis pictus (1.5 m) and Red sand boa Eryx johani (1 m) (Daniel 1970). In 1979, trade in hundreds of skins of the Indian egg-eating snake Elachistodon westermanni (0.8 m) was reported (see p. 6) but it seems likely that this was due to misidentification or false declarations. This species is only known from a handful of museum specimens (Rosenberg and Gans, 1976). There are about 20 other

species which are large enough to apparently be commercially viable (Anon 1933) but do not seem to have been used in the trade. These include 11 sea snakes (Hydrophiidae), some of which are used in the skin trade in E.Asia and the Philippines, also the Dog-faced water snake Cerberus rhynchops which is extensively used in S.E.Asia.

The most important lizards are the monitors Varanus, four species of which are involved. The Water monitor V. salvator (2.5 m) is the most valuable because of its attractively patterned skin, followed by the Indian monitor V. bengalensis (1 m), the Yellow monitor V. flavescens (1 m) and the Desert monitor V. griseus (1 m). The only other lizards of commercial value are the Indian spiny-tailed lizard Uromastix hardwickii (0.45 m) and potentially some Himalayan agamids (Daniel 1970).

In the past the three species of crocodilians, the Mugger Crocodylus palustris, the Estuarine crocodile C. porosus and the Gharial Gavialis gangeticus were very important in the skin trade but their numbers were gravely depleted and legal export of their skins ceased some time ago.

The extent of trade in leather from sea turtles, five species of which occur in India - Cheloniidae and Dermochelyidae - is not known but 'considerable numbers' of Olive ridley turtles Lepidochelys olivacea were captured by fishermen on the Visakhapatnam coast during the period November 1978 to March 1979 (Dutt 1979), and hundreds of skinned turtles were reportedly washed ashore on the east coast of India during a recent nesting season of the Olive ridley (F.W.King pers. comm. 1980). Apparently this trade is only of recent origin (J.Frazier pers. comm. 1980). The destination of the turtle skins in trade is not known; a recent analysis of the trade statistics did not reveal any evidence of trade out of India (Mack, Duplaix and Wells 1979). The flippers of the Green turtle Chelonia mydas and the Olive ridley are used by fishermen in Kutch to make crude shoes for walking on coral reefs (R.Whitaker pers. comm. 1981).

Methods of Catching and Treatment of Skins

Most snakes are caught in south India where there has been a long tradition amongst certain tribal groups. Of these the Irulas of Tamil Nadu and Andhra Pradesh are the most important. They have an intimate knowledge of the species involved and are adept at tracking them down and digging them out of their dens. A good trapper could apparently collect two to five big snakes in a day in a good area that had not been heavily hunted (Whitaker 1978). The Irulas have never been primarily snake catchers, however. They also hunt rats and collect honey, termites and roots.

The number of snakes that used to be caught for the skin trade is unknown but at one stage about 9000 skins used to be handled daily by one tannery in south India; by 1970 this was reduced to 3000 a day (Daniel 1970).

The monitor lizards have been obtained from all parts of India and the most important species is the widely distributed Indian monitor. The Water monitor occurs in coastal northeast India, and also the Andaman and Nicobar Islands. The Desert monitor is confined to the arid northwest. Monitors are usually obtained by digging them out of their burrows or chasing them with dogs.

The skins obtained are sometimes exported in a raw state with only superficial cleaning and perhaps an alum or bark-tanning procedure, but many skins, especially those of snakes, are very perishable in this state and are therefore chemically tanned before export. A number of tanneries, especially in the Madras, Calcutta and Kanpur areas, used to specialise in tanning reptile skins and, although no reptiles are now killed legally, they presumably continue to tan illegally taken reptile skins along with their legitimate business in other leathers.

TABLE 1 Exports of raw reptile skins from India, 1965-80

Year*	Quantity	Value (Rs)	Value per unit of quantity
1965-66	319,182 kg.	5,111,756	16.0 Rs per kg
1966-67	285,181 "	7,216,256	25.3 "
1967-68	211,184 "	4,701,654	22.3 "
1968-69	1,095,321 No.	5,012,951	4.6 Rs each
1969-70	1,735,331 "	7,234,374	4.2 "
1970-71	357,687 "	1,317,309	3.7 "
1971-72	708,799 "	2,084,306	2.9 "
1972-73	674,180 "	2,572,654	3.8 "
1973-74	442,696 "	2,615,622	5.9 "
1974-75	171,175 "	1,149,981	6.7 "
1975-76	86,089 "	451,974	5.3 "
1976-77	7,066 "	50,000	7.1 "
1977-78	590 kg.	421,618	714.6 Rs per kg
1978-79	0	0	-
1979-80	0	0	-

* Years are from April to March.

Source: Monthly Statistics of Foreign Trade of India

Internal Trade in Skins and Products

The legal export of reptile skins and products virtually ceased in 1976 and no licences for the killing of reptiles have been issued since that time. However it is still legally possible to trade internally in stocks of old skins and products made from them. Under the terms of the Wildlife (Protection) Act, 1972 (which is in effect in all states except Nagaland and Jammu and Kashmir) and its subsequent amendments, all species of reptiles are now protected. In the original Act only the crocodilians, Indian python, Desert monitor and Water monitor were protected and the killing of snakes was largely indiscriminate and uncontrolled. An amendment in October 1977 brought all snakes under control and no licences for the killing of reptiles for trade purposes have apparently been issued by State Chief Wild Life Wardens since that date.

However, it is widely believed that the killing of reptiles especially snakes and monitor lizards still continues on a large scale (Anon 1978b, Biddapa 1980, Gill 1981) and a brief investigation as part of this study uncovered evidence of continued killing. Vendors in a market at Mysore, Karnataka were ostensibly selling food and curios to tourists but as a sideline they handled fresh untanned skins of snakes such as Asiatic cobra and Indian sand boa. This practice has also been noted at Mahabalipuram, Tamil Nadu (F.W.King pers. comm. 1980). In Calcutta several dealers had stocks of skins of various species including many Indian python and Water monitor. It was claimed that many of the skins were freshly obtained and judging by their appearance and odour it was thought that this was the case.

Skins that are sold directly to tourists command a much higher price than those destined for the commercial trade. Tanned Rat snake skins in Calcutta were offered at Rs.20-40; Yellow monitor, Rs.20; Water monitor, Rs.50-80; and a 10 ft Indian python skin, Rs.320. In Bombay the skin prices were lower, e.g. about Rs.14 for a Rat snake. The snake catchers would be paid about Rs.6-8 for a 4.5 in. wide Rat snake skin, Rs.9-10 for a 5 in. skin, Rs.15-16 for a 5.5-6 in. skin, and Rs.16-18 for a 6.5 in. skin. The trader probably realises at least three times these prices when he sells to a bag manufacturer and even more if he sells to an international smuggler. (Rate of exchange at the time of the survey : approx. Rs.18 = £1 Sterling). The price per skin of whipsnakes (a trade name for the Rat snake) in March/April 1980 was US\$3 in Singapore, \$2-4 in France, and \$3-5 in the U.K.

Many of the skins are made up into leather goods for the tourist trade - bags, wallets, belts, shoes and even jackets are commonly sold in the tourist centres of the main cities and towns. In theory the sale or transfer of any reptile product without a licence is forbidden under the terms of the Wildlife (Protection) Act. Although no reptiles are now being killed legally it was apparent at the time of the 1977 amendment to the Act that some dealers had large stocks of reptile skins. These stocks were declared to the State Chief Wild Life Wardens and the dealers were allowed to continue trade within the country but only with these legally acquired skins.

In Bombay there are very few licensed dealers in reptile products and only one has declared a stock of skins - 20,000 fully tanned and coloured Rat snake skins (P.Kannan pers. comm. 1981). However, there is a large number of traders ranging from travelling salesmen circulating amongst the tourists with a few bags and wallets to small shops in the high class hotels and larger shops in the more exclusive shopping centres. The products noted were mainly of Rat snake and Asiatic cobra with a very small quantity of Indian monitor and rather old-looking Indian python. The prices for Asiatic cobra products in the hotel shops ranged from Rs.45 for a belt, Rs.60 for a wallet to Rs.225 for a 5 skin bag and

Rs.300 for a briefcase. Rat snake was more expensive with bags up to Rs.300. Monitor purses were Rs.110., shoes Rs.180 per pair and bags Rs.225. At the roadside stalls Asiatic cobra bags could be obtained for Rs.90 or less (depending on the extent of haggling) and out-of-fashion Indian python bags were Rs.140.

Enforcement of the Wild Life (Protection) Act is the responsibility of the State Chief Wild Life Wardens. They can be aided in this task by the Government Regional Directors for Wild Life Preservation in each of the four major cities of India. In Bombay an active campaign of raids on unlicensed traders has been carried out under the supervision of the local Director (Grove 1981). Unfortunately the legal situation is very complex and perhaps inadequate and the larger dealers are able to survive confiscation of their stocks and unrealistic fines and carry on business after prosecution. However, the advantage of this level of enforcement is that the trade appears to be confined almost entirely to the commoner snakes - no crocodilian or fresh python products were noted during this study and very few monitor products were involved.

Madras used to be the centre of the snakeskin trade when it was legal and it is therefore not surprising that there are large stocks of skins still held there. A report by the Regional Director for Wild Life Preservation (Viswanathan 1979) listed 27 licensed dealers in Tamil Nadu (all except five in Madras) holding total stocks in September 1979 of 2,774,829 snake skins and 295,561 lizard skins. Two major dealers had over one million skins each. A more recent stock-take has apparently revealed the presence of a much larger number of skins - possibly as many as ten million snakes. In September 1980 the local Wildlife Warden seized about 17,000 snake skins valued at over Rs.50,000 from a tannery near Madras that was allegedly processing them without a licence (Anon 1980a). Reptile skins and products were available in many places and again involved mainly the Rat snake and Asiatic cobra. Prices were somewhat lower than in Bombay which was a reflection both of the local origin of the goods and the less international nature of the city. Apparently some crocodile skins are smuggled in from Sri Lanka for local processing.

In Calcutta there were 34 licensed dealers holding total stocks in December 1979 of 2,824,382 snake skins and 3,142,909 lizard skins (A.Bose, Regional Director, pers. comm. 1980). The snakes were separated into two categories: poisonous and non-poisonous but there were only 100 poisonous snakes (presumably Asiatic cobra). The lizards were split into four categories, all monitors: *Varanus*: 'oval-grained lizard' = *V. flavescens* 1,599,766; 'Agra lizard' which probably refers to *V. bengalensis* 1,532,500; 'Bengal lizard' = *V. bengalensis* 8025; and 'water lizard' = *V. salvator* 2618. Many of the dealers have retail outlets in the Hogg Market, a huge complex of stalls and shops where almost any item can be obtained. Here, in contrast to the other cities, there was a great variety of reptile skins and products available. The prices of the skins are included above and the following products were offered: Rat snake and Asiatic cobra bags Rs.95 (small), Rs.200 (large); Indian sand boa, wallets Rs.40, large bags Rs.200; Russell's viper bags Rs.150; Water monitor bags Rs.200; crocodile: fresh 'baby croc' (probably Mugger) bags Rs.1250, out-of-fashion bags Rs.600-800.

The ready availability of crocodile skin bags and python skins is particularly worrying as these species have been protected for some time in India. This indicates a low level of enforcement of the Act in this area. An enquiry put to the Chief Wild Life Warden established the fact that there were ten court cases for infringements in 1979 and these involved only one reptile - a python skin. The dealers intimated that python skins were readily obtainable in large numbers and that small numbers of crocodile skins could be produced on request.

TABLE 2a Exports of raw reptile skins from India, 1971-74

TYPE OF SKIN AND (TARIFF HEADING)	Country of Destination	No. 1971	Value (Rs)	No. 1972	Value (Rs)	No. 1973	Value (Rs)	No. 1974	Value (Rs)
WATER MONITOR (2119003)	Australia	14000	60439						
	France	40000	80833	30750	80720	23000	102693		
	Hong Kong	1000	3911						
	Italy	1800	5464	3060	8109				
	Japan	90890	314863	93938	388170	11000	51600	1951	9275
	Switzerland	650	3185						
	United Kingdom	5000	15305	3350	12710				
	TOTAL	153340	484000	131098	489709	34000	154293	1951	9275
OTHER MONITORS (2119004)	France					5000	22081		
	Fed. Rep. of Germany			8000	38079				
	Italy	13000	41918	10000	41256				
	Japan	25000	82113	40000	197187	37000	266366	9000	31363
	Spain							10000	29003
	United Kingdom					7940	26197	9799	45011
	TOTAL	38000	124031	58000	276522	49940	314644	28799	105377
OTHER LIZARDS (2119005)	Austria	300	1506						
	France	15900	24096	139200	372823	28526	142571	31650	236719
	Fed. Rep. of Germany	4000	7726					3000	25766
	Iran			5000	25540				
	Italy			52715	204837				
	Japan	278026	847006	297730	1411477	155830	986858	102673	766391
	Singapore	5000	17402						
	Spain			16300	65425			25000	170835
	Switzerland			3866	17860				
	United Kingdom	96108	223372	15911	61343	26000	102820	50000	171552
	TOTAL	399334	1121108	530722	2159305	210256	1232249	212323	1371263
SNAKES (other than python) (1970-76 2119006)	Canada			1500	2400				
	France			3650	13820	1900	7521		
	Fed. Rep. of Germany			750	1842			10000	160791
	Italy	6100	21075	72165	130376	6500	8200		
	Spain			350	995				
	Sweden	1000	3500						
	Switzerland	5000	26488						
	United Kingdom			9670	21361				
	TOTAL	12100	51063	88085	170794	8400	15721	10000	160791
OTHER REPTILES (1970-76 2119006)	Fed. Rep. of Germany	500	1133	400	688				
	Italy	2000	5321						
	United Kingdom	31700	25153						
	TOTAL	34200	31607	400	688				
TOTALS	Australia	14000	60439						
	Austria	300	1506						
	Canada			1500	2400				
	France	55900	104929	173600	467363	58426	267345	31650	236719
	Fed. Rep. of Germany	4500	8859	8750	39921			13000	186557
	Hong Kong	1000	3911						
	Iran			5000	25540				
	Italy	22900	73778	137940	384578	6500	8200		
	Japan	393916	1243982	431668	1996834	203730	1304824	113624	807029
	Singapore	5000	17402						
	Spain			16650	66420			35000	199838
	Sweden	1000	3500						
	Switzerland	5650	29673	3866	17860				
	United Kingdom	132808	263830	28931	95414	33940	129017	59799	216563
	GRAND TOTAL	636974	1811809	808305	3097018	302596	1716907	253073	1646706

TABLE 2b Exports of raw reptile skins from India, 1975-79*

TYPE OF SKIN AND (TARIFF HEADING)	Country of Destination	1975		1976		1977	
		No.	Value (Rs)	No.	Value (Rs)	Kg.	Value (Rs)
WATER MONITOR (2119003)	United Kingdom	21000	152109				
	TOTAL	21000	152109				
OTHER MONITORS (2119004)	Japan	35352	208637				
	TOTAL	35352	208637				
OTHER LIZARDS (2119005)	Fed. Rep. of Germany	3210	16305				
	Hong Kong			25000	142688		
	Italy	10000	53955				
	Japan	37129	192846				
	United Kingdom	16000	81914	5000	21231		
	TOTAL	66339	345020	30000	163919		
SNAKES (other than python) (1976-2119006 1977-2119905)	Fed. Rep. of Germany			7066	50000	580	412893
	TOTAL			7066	50000	580	412893
OTHER REPTILES (1977-2119905)	Italy					10	8725
	TOTAL					10	8725
TOTALS	Fed. Rep. of Germany	3210	16305	7066	50000	580	412893
	Hong Kong			25000	142688		
	Italy	10000	53955			10	8725
	Japan	72481	401493				
	United Kingdom	37000	234023	5000	21231		
	GRAND TOTAL	122691	705766	37066	213919	590	421618

* There were no recorded exports of raw reptile skins in 1978 and 1979.

Source: Monthly Statistics of Foreign Trade of India.

In Delhi there were 30 licensed dealers holding total stocks of 89,267 skins in December 1977, 151,540 in December 1978 and 158,694 in December 1979 (Prasad pers. comm. 1980). There was no species breakdown available but it was thought that most of the skins would be from Asiatic cobras. It was assumed that the annual increase in numbers was due to freshly killed snakes even though no licences for killing had been issued. Prices were slightly higher than Bombay and a wider variety of products was available. Rat snake and Asiatic cobra wallets were Rs.65-90 and Indian python wallets were Rs.105. A jacket made from at least 15 skins of Russell's viper was Rs.450 and Asiatic cobra skin jackets were slightly cheaper. An Asiatic cobra skin attache case was Rs.540. There were probably no seizures involving reptile products in Delhi in 1979 but previous seizures and prosecutions involved illegally taken monitor skins.

Export Trade

As indicated previously the export of reptile skins has long been an important trade. Since the early 1950s there have been several major fluctuations in the quantities exported (Tables 1 and 3), presumably as a result of differences in availability of skins and the introduction of various conservation restrictions. Crocodilians were the first reptiles to be covered by controls - export of them or any of their products was apparently banned in 1958. In 1948 16,000 and in 1949 30,000 raw skins, mainly of marsh crocodile, were exported through Calcutta and the estimated production of crocodile skins at that time was 40,000 to 50,000 per annum. The only export subsequent to 1958 seems to have been in 1964 when 223 kg of crocodile skins were exported to the U.K. and France (Daniel 1970, Whitaker & Daniel 1978). The Exports (Control) Order, 1968 (made under the Imports and Exports (Control) Act, 1947) introduced a quota system for the export of the Indian python and Water monitor. By 1973 the commercial export of Indian python and all poisonous snakes was banned and all other reptiles were subject to quotas. In 1974 the Desert monitor and Reticulated python Python reticulatus (which only occurs in Indian territory on the Nicobar Islands) were added to the banned list and in December 1975 the other three species of monitor, the Indian spiny-tailed lizard and all snakes and sea turtles were also banned. In 1979 all commercial reptile exports from India were finally prohibited. India ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on 3 July 1976. Appendix I at that time listed the following Indian species involved in the skin trade: Mugger; Gharial; Yellow, Indian and Desert monitors; Indian python. Appendix II listed the five sea turtles, Estuarine crocodile, Water monitor, Reticulated python and Indian egg-eating snake. On 4 February 1977 all the sea turtles were elevated to Appendix I and the Indian spiny-tailed lizard and the sand boas were added to Appendix II. On 28 June 1979 the Estuarine crocodile was elevated to Appendix I. Japan has, under the terms of the Convention, reserved the right to continue trading in three of the sea turtle species, the Estuarine crocodile and the three Appendix I monitors. Several other countries have also placed reservations on sea turtles and the Estuarine crocodile.

The great volume of valuable skins exported in the early 1950s presumably comprised large numbers of crocodilian skins and the demise of this trade led to a slump at the end of that decade. However, over the next ten years there was a rapid increase in the skin trade followed by another slump the reasons for which are not entirely clear. The statistics show this slump is mainly accounted for by a very considerable decrease in tanned snake skins exported to the Federal Republic of Germany and the U.S.A. in 1968-70. It may indicate stock-piling of Indian python skins prior to the introduction of the quota system for that species. Due to various restrictions in the mid 1970s the trade continued at a fairly low level with a

final surge in 1976 when the export ban imposed at the end of 1975 was lifted for snake skins to enable registered exporters to liquidate their stocks.

Despite the restriction on export of all reptiles from about the end of 1975 both the Indian export statistics (Tables 1-4) and the import statistics of consumer countries (Table 5) indicate that considerable quantities of skins have been exported - at least some of these presumably illegally. Official trade statistics for consumer countries were only readily available in a few cases and it is apparent that the number of animals involved is much greater than indicated. That the trade is still continuing is demonstrated by an analysis of imports into the U.S.A. during January to March 1981 (TRAFFIC (U.S.A.) 1981). Thousands of raw snake skins were imported from Europe and Afghanistan, and thousands of snake skin products from Europe, Canada and Hong Kong, all with India given as the country of origin.

The U.K. records the import from India of 263,412 skins of Yellow monitor in 1976 (Department of the Environment 1976). This species was listed on Appendix I of CITES at the time and its export was banned by India. However the U.K. in its preliminary implementation of CITES (ratification did not take place until 2 August 1976) specifically excluded this species (and the Indian monitor and Desert monitor) in its terms of implementation. India records the export to the U.K. in 1976 of 125,000 Water monitor skins and 74,173 'other lizard' skins, as well as 20,000 'other monitor' skins (Tables 2b & 4b). The U.K. re-exported many monitor skins originating from India - a total of over 250,000 Yellow monitors and nearly 60,000 Desert monitors from 1976 to 1978 (Department of the Environment 1976, 1977, 1978) many of which went to CITES Party states and thus contravened at least the spirit of the Convention.

The 1978 CITES report of the Federal Republic of Germany lists the import from India of 32 pieces of leatherware made from a species of Boidae and three skins of Python mucosus (sic), but no imports of Water monitor skins (cf. Table 4b). The report also lists the re-export of 27 skins and 54 handbags made from a species of Varanus originating in India (F.R.G. Yearly Statistics 1978). The 1979 report (F.R.G. Yearly Statistics 1979) lists the import of 513 skins of the Indian egg-eating snake from Belgium and also the re-export of seven articles of clothing made from this species and originating from India (see p. 1).

The CITES reports of Switzerland (Swiss Federal Veterinary Office) detail trade in reptile skins of Indian species but without citing India as the country of origin. In 1976 imports of 72,365 skins of the three Appendix I monitors and 1041 skins of Indian python were recorded. In 1977 there were 4322 monitor skins imported and 2200 re-exported; in 1978 there were 650 skins and 1135 watchstraps made from Yellow monitor re-exported, and in 1979 the re-import of 60 skins and the re-export of 4518 sq.ft. of skins of Yellow monitor was recorded.

The CITES reports of Italy have not listed imports but the re-exports involve many reptile products stating India as the country of origin. In 1978 there were 16 cases made from Yellow monitor, and 104 pairs of shoes made from Reticulated python. There were also 693 cases and 278 belts made from the Spotted tree monitor Varanus timorensis - an Australasian species not occurring in India! In 1979 there were 12 bags made from Estuarine crocodile, and 25 skins, 2 coats, 747 belts, and 1738 shoes made from Reticulated python. Again there were 1023 Spotted tree monitor bags, also 1476 bags and 14,697 shoes made from the Pacific monitor Varanus indicus - another species that does not occur in India!

The 1979 CITES report of France records the re-export of 484 bags, 121 belts and 441 other articles made from Ptyas mucosus originating in India. This species is not listed on the appendices to the Convention.

India does not record the export of any CITES listed reptile skins or products in its annual reports (Reports on the implementation of CITES 1976-80) but the CITES trade figures of other countries further indicate that large scale, presumably illegal exports have been continuing.

TABLE 3 Exports of tanned reptile skins from India, 1951-80

Year*	Quantity	Value (Rs)	Value per unit of quantity
1951-52	c. 87,989 kg.	5,173,887	58.8 Rs per kg
1952-53	c. 127,107 "	7,214,289	56.8 "
1953-54	c. 66,348 "	2,413,973	36.4 "
1954-55	c. 76,711 "	1,586,632	20.7 "
1955-56	c. 88,345 "	1,536,779	17.4 "
1957	c. 28,449 "	682,465	24.0 "
1958	c. 29,668 "	518,208	17.5 "
1959	c. 61,420 "	1,019,507	16.6 "
1960-61	53,802 "	938,486	17.4 "
1961-62	173,211 "	3,015,779	17.4 "
1962-63	129,312 "	2,711,095	21.0 "
1963-64	135,113 "	5,547,386	41.1 "
1964-65	167,149 "	9,568,493	57.2 "
1965-66	132,058 "	9,252,188	70.1 "
1966-67	135,229 "	17,378,004	128.5 "
1967-68	213,854 "	35,939,463	168.1 "
1968-69	3,917,453 No.	27,473,792	7.0 Rs each
1969-70	2,692,803 "	14,001,835	5.2 "
1970-71	2,169,629 "	7,624,969	3.5 "
1971-72	1,607,043 "	5,034,771	3.1 "
1972-73	1,812,136 "	5,225,000	2.9 "
1973-74	2,186,030 "	7,401,000	3.4 "
1974-75	1,092,143 "	16,775,427	15.4 "
1975-76	1,910,568 "	20,979,901	11.0 "
1976-77	3,164,577 "	37,136,226	11.7 "
1977-78	27,138 kg.	12,272,097	452.2 Rs per kg
1978-79	921 "	107,349	116.6 "
1979-80	3,926 "	627,771	159.9 "

* Years are usually from April to March.

Source: Monthly Statistics of Foreign Trade of India.

TABLE 4a Exports of tanned reptile skins from India, 1971-75

TYPE OF SKIN and (TARIFF HEADING)	Country of Destination	No. 1971 Value (Rs)	No. 1972 Value (Rs)	No. 1973 Value (Rs)	No. 1974 Value (Rs)	No. 1975 Value (Rs)
WATER MONITOR (1970-76 6119903)	Austria		1570 5920			
	Denmark				1000 5865	
	France	12000 56908	23000 48923	27662 119899	151605 349409	35500 240725
	Fed. Rep. of Germany	17500 83935			30128 232376	
	Hong Kong		2500 11022			
	Italy	136900 167880	5000 9132			170000 739526
	Japan	23200 107170	94879 403984	109600 801156	48818 400158	27573 133324
	Singapore				8895 44425	
	Spain					6053 211144
	Switzerland	6600 21474	3350 13288		3721 19729	
	United Kingdom	65000 105616	15125 47051	20852 82869	56355 523512	55000 261009
	USA	2250 12410				
	TOTAL	263450 555393	145424 538320	158114 1003924	300522 2190234	294126 1585728
OTHER MONITORS (1970-76 6119904)	Austria		500 7300			
	France	7000 32316		52500 264965	5000 32972	
	Fed. Rep. of Germany	3500 18825	7000 32258		2000 18859	
	Italy	7100 33129				
	Japan	138800 625892	68300 339147	28000 200610	78495 564365	21000 159006
	United Kingdom	10000 26948	10000 23509	15000 56717		
	USA	5000 12336				
	TOTAL	171400 749446	85800 402214	95500 522292	85495 616196	21000 159006
OTHER LIZARDS (1970-76 6119905)	Australia		1358 10531			
	France	138500 359224	90062 209664	15000 74347	68852 383607	30000 185568
	Fed. Rep. of Germany	2000 9051	15000 59142	4500 15664	200 1000	
	Hong Kong		4100 26504	15000 94560		7500 32369
	Italy	32000 93444	49126 130476			59900 309971
	Japan	159210 657280	204777 1133267	118940 761602	23179 171507	103652 767388
	Singapore	5800 10157				2310 12069
	Spain	1000 2087	4000 20662			7500 58357
	Switzerland	9300 34681	1100 6321		2000 14492	
	United Kingdom	49658 130057	50214 147574	91112 345427	136066 817140	170150 942443
	TOTAL	397468 1295981	439737 1744141	244552 1291600	230297 1387746	381012 2308163
SNAKES (other than python) (1970-Mar 77 6119906)	Australia		40 86	422 990		
	Austria		280 900			
	Belgium				9000 170091	
	Colombia				45000 306253	
	Denmark		400 1739	1000 4101		
	France	21500 117885	33350 150998	228070 833169	253438 4687103	75992 1525951
	Fed. Rep. of Germany	159910 791519	306128 1376464	346901 2119368	214367 3484786	201802 4377089
	Italy	95503 100356	332769 608311	203495 680594	205863 2590791	230609 3549696
	Japan	11000 20270	30610 107720	34300 169270	44635 346962	
	Netherlands					311 1792
	Spain	79500 361333	105000 490501	131500 487257	157582 3484841	50000 840199
	Spanish Sahara	5000 11040				
	Sweden		800 5587	200 1543		
	Switzerland	10000 46559	5000 22764	1957 9458	400 10817	
	Thailand				2500 44369	
	United Kingdom	245758 608842	184092 567886	319520 1115022	70123 1368323	364992 5477423
	USA		20000 63339	114859 509586	1056 25577	78000 1076944
	TOTAL	628171 2057804	1018469 3396295	1382224 5930358	958964 16214660	1046756 17155547
PYTHON (6119907)	France				15000 548654	
	United Kingdom					100 5507
	TOTAL				15000 548654	100 5507
OTHER REPTILES (1970-76 6119909)	France				16666 105501	4000 32268
	Fed. Rep. of Germany			13981 87717		
	Italy			17000 72646	26600 129406	
	Japan			5700 23324	20500 163960	
	Spain		90000 135576			
	United Kingdom	200 434		10000 26125	25000 96286	30250 232002
	USA					10000 157077
	TOTAL	200 434	90000 135576	46681 209812	88766 495153	44250 421347
TOTALS	Australia		1398 10617	422 990		
	Austria		2350 14120			
	Belgium				9000 170091	
	Colombia					45000 306553
	Denmark		400 1739	1000 4101	1000 5865	
	France	179000 566333	146412 409385	323232 1292380	510561 6107246	145492 1984412
	Fed. Rep. of Germany	182910 903330	328128 1467864	365382 2342648	246696 3738021	201802 4377089
	Hong Kong		6600 37526	15000 94560		7500 32369
	Italy	271503 594809	386895 747919	220495 753240	232463 2720197	460559 4599193
	Japan	332210 1410612	418566 1984118	296540 1955962	215627 1646952	152228 1059718
	Netherlands					311 1792
	Singapore	5800 10157			8895 44425	2310 12069
	Spain	80500 363420	199000 646739	131500 487257	157582 3484841	63553 1109700
	Spanish Sahara	5000 11040				
	Sweden		800 5587	200 1543		
	Switzerland	25900 102714	9450 41373	1957 9458	6121 45038	
	Thailand				2500 44369	
	United Kingdom	370616 871897	259431 786020	456484 1626160	287544 2805261	620492 6918384
	USA	7250 24746	20000 63339	114859 509586	1056 25577	88000 1234021
	GRAND TOTAL	1460689 4659058	1779430 6216546	1927071 8957986	1679044 21452643	1787244 21635298

TABLE 4b Exports of tanned reptile skins from India, 1976-79

TYPE OF SKIN and (TARIFF HEADING)	Country of Destination	1976 No. Value (Rs)	1977 No. Value or Kg. (Rs)	1978 Kg. Value (Rs)	1979 Kg. Value (Rs)
WATER MONITOR (1970-76 6119903 1978-79 6116901)	Belgium				424 45543
	Fed. Rep. of Germany			528 36329	
	United Kingdom	125000 459126			
	TOTAL	125000 459126		528 36329	424 45543
OTHER MONITORS (6119904)	United Kingdom	20000 144667			
	TOTAL	20000 144667			
OTHER LIZARDS (1970-76 6119905 1977-79 6116903)	France	10000 45890			
	Fed. Rep. of Germany	88913 660370			
	Hong Kong	10000 17297			
	Italy	68977 390927	300 kg 28730		
	United Kingdom	69173 366885			
	TOTAL	247063 1481369	300 kg 28730		
SNAKES (other than python) (1970-Mar 1977 6119906 Apr 1977-1979 6116905)	Africa	25000 168200			
	France	148977 2665487	2483kg 1212872		
	Fed. Rep. of Germany	896125 12661369	23425no 4197534 +10249kg		
	Hungary		99kg 17024		
	Italy	330500 4265100	4794kg 2059676		
	Japan	45000 518648			
	Spain	245000 3223598	2496kg 2057970		
	Switzerland	276192 2462462			
	United Kingdom	969945 8614020	4119kg 821892		
	USA	115500 1499979	1960kg 1236325		
	TOTAL	3052239 36078863	23425no 12603293 +26200kg		
OTHER REPTILES (1970-76 6119909 1977-79 6116909)	Australia				709 186667
	Czechoslovakia			801 96349	
	France				120 11000
	Italy				2142 334162
	United Kingdom		110kg 738		581 61399
	TOTAL		110kg 738	801 96349	3552 593228
TOTALS	Africa	25000 168200			
	Australia				709 186667
	Belgium				494 45543
	Czechoslovakia			801 96349	
	France	158977 2711377	2483kg 1212872		120 11000
	Fed. Rep. of Germany	985038 13321739	23425no 4197534 10249kg	528 56329	
	Hong Kong	10000 17297			
	Hungary		99kg 17024		
	Italy	399477 4656027	5094kg 2088406		2142 334162
	Japan	65000 663315			
	Spain	245000 3223598	2496kg 2057970		
	Switzerland	276192 2462462			
	United Kingdom	1164118 9440031	4229kg 1822630		581 61399
	USA	115500 1499979	1960kg 1236325		
	GRAND TOTAL	3444302 38164025	23425no 12632761 +26610kg	1329 152678	4046 638771

Source: Monthly Statistics of Foreign Trade of India.

Little is known about the ways in which the skins leave the country but some of the possible routes have been documented. In August 1979 consignments totalling 150,000 snake skins valued at about Rs.6,000,000 were seized in Calcutta, the majority at the airport. The species involved were mainly Rat snake, Asiatic cobra and Indian python. It was thought that Customs officials were probably involved in the attempted smuggling (Anon 1979a). No other seizures of attempted export by air are known but there is evidence of smuggling on an enormous scale by sea. In April 1978 seven packages of snake skin comprising about 20,000 skins were retrieved by Customs officers from the sea off Bombay. The packages had been dumped into the sea from a boat which sank as it was leaving for the Persian Gulf (Anon 1978a). The boat was an Arab dhow and this case is an illustration of the important trade that takes place between the Middle East and India (Miller 1980). This trade exists mainly for the smuggling of gold into India from Dubai. Gold is a much sought after investment item by the Indian people and a decision was taken in 1947 by the new Indian government to halt the excessive purchase of gold in order to stabilise the economy. The old-established dhow trade then began to smuggle vast quantities of gold into India via the west coast and on their return journey they would take any Indian produce that was of value to the western world. The ban on export of reptile skins provided an ideal market for the dhow trade and many thousands of skins have been shipped to Dubai and thence to the European consumer countries.

Small numbers of skins and articles are smuggled out of India by parcel post. Several instances have been detected by Customs in Bombay and in such cases the address of the sender has been false (P.Kannan pers. comm. 1980).

Indian reptile skins are also exported via the surrounding countries. The consumer countries have recently begun to import large number of skins from Nepal, Bangladesh, Sri Lanka and Pakistan. These countries all require licences for the export of reptiles skins and it is likely that few licences are being issued. This is due to legal restrictions and because at least some of these countries lack good populations of commercially desirable species that can be exploited. Nepal falls into the latter category and the authorities there, although aware of this illegal trade, are unable to prevent it entirely (B.N.Upreti pers. comm. 1980).

Although the export legislation covers all reptile products it is apparent that the substantial internal business in bags and other consumer products is geared almost entirely towards the export trade. The Indian people in general have no interest in reptile products because of religious taboos or simply because they are too expensive, and it is evident that the vast majority are bought by foreign tourists. At present there is apparently no publicity in the exit area of ports or the tourist offices indicating that the export of reptile goods (and most other wildlife) is illegal without a licence. Many foreign tourists in the shops visited in the course of the study were purchasing numbers of bags, belts and other products to take home as presents and it is likely that all were exported without any trouble. Also it was noted in February 1978 that reptile skin products were openly for sale in the government licensed shop in Hyderabad airport (F.W.King pers. comm. 1981). This study was unable to discover any information relating to confiscation of reptile products from tourists leaving the country anywhere in India.

Effects on Wild Populations and the Role of Reptiles in the Environment

Unfortunately very little is known about the status of any species of reptiles in India but some references indicate that certain species are declining and threatened as a direct result of the skin trade (e.g. Tyagi and Sharma 1980).

Whitaker (1978) mentions several examples of snakes that have been affected by the trade. The Indian python is 'now locally extinct in many areas'. The Indian sand boa has been 'extensively killed for its skin'. The Checkered keelback watersnake 'Though probably the most common and abundant snake in India, we have seen several local populations wiped out by intensive all-season collection'. The Rat snake: 'Entire populations have been wiped out in some localities where they were formerly abundant...'. The Asiatic cobra: 'hunted and killed for their skins throughout most of their range. Since 1973 the export of Asiatic cobra skins has been controlled by the Government of India; however, the market continues to flourish and some tanneries deal in thousands of skins per day'. An expert on snakes and their conservation in south India pointed out that the collection of a few live common snakes for display purposes required the expenditure of far more time and the coverage of a far greater area now than the same procedure thirty years ago (Dr.M.V.Rajendran pers. comm. 1980). This presumably indicates a decrease in numbers due to the skin trade and perhaps other factors. Three species of Indian monitor lizard - Indian, Desert and Yellow - were included in Appendix I of CITES in 1973 at the request of both India and Bangladesh presumably because they were acutely threatened by trade. Daniel (1970) referring to the Indian species of *Varanus* mentions the scarcity of this 'once common lizard' and Dharmakumarsinhji (1978) noted a decrease in monitors and snakes in Kathiawar (Gujarat).

Some of the snakes important in the skin trade are of great economic value as rodent destroyers. It is possible that as much as 20-50 per cent of India's grain crop is destroyed annually by rodents (Whitaker 1978). The Rat snake is particularly important in rodent control - a single individual may kill hundreds of rats and mice annually.

Conclusions

It is evident that the present situation in India is unsatisfactory. The existence of an extensive internal trade is not compatible with the present protection legislation and export ban. Whilst reptile skins are freely available the incentive to kill more animals and smuggle out the skins will remain. Certain populations of some reptile species have already been adversely affected by the skin trade and local extinctions may continue to occur.

Tourists will continue to buy and export reptile products as long as the retail market and the lack of checks at export points continue.

Many consumer countries will continue to import certain Indian reptile skins and products because once items made from species not listed by CITES have been successfully smuggled out of the country they can be legally imported into many countries without documents from the country of origin.

TABLE 5 Imports of reptile skins into various countries from India, 1976-80

COUNTRY	Type of Skin and (Tariff heading)	1976 Quantity ^o Value	1977 Quantity ^o Value	1978 Quantity ^o Value	1979 Quantity ^o Value	1980 Quantity ^o Value
FRANCE - 1 Val. in FF	Raw skins (41.05A)	? ?	3000 949000	3000 1346000	? ?	? ?
FED. REP. OF GERMANY- 1 Val. in DM	Raw skins (4101660) Semi-tanned skins*(4105200) Processed skins*(4105930)	1600 267000 18700 2962000 400 127000	? ? ? ? ? ?	0 0 17000 2842000 1700 513000	0 0 12000 3255000 1100 346000	? ? ? ? ? ?
HONG KONG-2 Val. in HK\$	Reptile leather (611991)	303 172254	? ?	? ?	? ?	? ?
JAPAN - 3 Val. in Yen	Lizard skins (4101272) Lizard leather (4105220)	8628 15815000 435 2237000	0 0 0 0	0 0 0 0	3453 22892000 0 0	0 0 0 0
SPAIN - 1 Val. in Ptas	Pickled/cured skins*(410186) Semi-tanned skins*(410502)	? ? ? ?	0 0 6000 44028000	1000 2761000 12000 71316000	? ? ? ?	? ? ? ?
UK - 4 Val. in £	Raw skins (1976-77 - 41011712 1978-80 - 41016600) Undressed reptile leather (1976-77 - 41050195 1978-80 - 41052000) Dressed reptile leather (1976-77 - 41050455 1978-80 - 41059300)	1713 35131 ? 1421 35960	1041 30258 ? 236 10000	881* 49948 8367 309490 164* 11424	325* 34808 5402 382046 4* 351	821* 63508 160 33719 180* 12671
USA - 5 Val. in US\$	Raw skins (2119020)	41852 135534	62864 271913	? ?	? ?	? ?

^o Quantity is in kg except for USA which is in 'pieces'.

* Includes fish products in the tariff heading but it is unlikely that any were involved in the Indian exports.

? Figures not obtained in time for this report.

1. Wallis, B.E. 1980.
2. Hong Kong Trade Statistics. Census and Statistics Dept., Hong Kong.
3. Japan Exports and Imports: Commodity by Country. Japan Tariff Association.
4. External Trade Statistics of the United Kingdom. H.M. Customs & Excise Statistical Office.
5. US Central Imports Schedule A FT 135. US Dept. of Commerce, Washington.

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Recommendations

1. Urge the Government of India to:
 - (i) ban the internal trade in skins and products. The existing stocks held by dealers could be taken over by organizations such as the State Trading Corporations. Alternatively the export ban could be lifted for registered stocks with a stipulation that dealers must reduce their stocks by at least 25 per cent a year, thus ending all trade within 4 or 5 years;
 - (ii) improve enforcement of legislation in India to control illegal killing and selling of products;
 - (iii) provide greater publicity to the details of Indian export controls for the benefit of foreign tourists;
 - (iv) instigate Customs checks for reptile skins in commercial consignments and for products exported by tourists;
 - (v) encourage education of the people of India (especially the tribals involved in catching snakes) in the need for conservation of reptiles;
 - (vi) propose the Rat snake Ptyas mucosus and the Asiatic cobra Naja naja for addition to CITES Appendix II to stimulate international enforcement of their export ban.
2. Urge the Government of Japan to withdraw their reservations under Article XXIII of CITES relating to the three Indian species of monitors Varanus bengalensis, V. flavescens, V. griseus.
3. Encourage studies on the population status of commercially important reptiles with a view to formulating management plans for controlled exploitation of venoms and skins.



P. Smit